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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,910	12/15/2000	Mark B. Olson		2438

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EXAMINER

LU, JIPING

ART UNIT PAPER NUMBER

3749

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,910

Applicant(s)

OLSON, MARK B.

Examiner

Jiping Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/20/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-20 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-17 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 1-2, 4-20 are pending . Claims 18-19 are withdrawn from further consideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621)

Robertson, III shows a clean air filter and delivery apparatus comprising an air return means 1, an air filter means 2, a blower 13, an air supply means 4, a flexible duct 3 and a second filter cartridge 7 which are arranged same as claimed. Reither teaches a single inlet backward curved centrifugal fan same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the single inlet backward curved centrifugal fan of Reither for the fan 13 of Robertson, III in order to provide a high efficiency.

4. Claims 2, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621) as applied to claim 1 as above, and further in view of Schlör (U. S. Pat. 6,164,457).

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The clean air filter and delivery apparatus of Robertson, III as modified by Reither as above includes all that is recited in claims 2,7 except for a first filter cartridge having a frame including upper and lower surfaces and an elongate sheet of filter media extending substantially perpendicularly to and between the upper and lower surfaces. Schlör teaches a filter cartridge with upper and lower surfaces and elongate sheet of filter 13 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the filter cartridge 21 of Schlör for the filter cartridge of Robertson, III in order to improve the air cleaning efficiency.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621) as applied to claim 1 as above, and further in view of Wolfert (U. S. Pat. 4,762,053)

The clean air filter and delivery apparatus of Robertson, II as modified by Reither as above includes all that is recited in claims 5-6 except for the mesh grill for the airflow through the filter cartridge. Wolfert teaches a mesh grill 64 for the air flow through the filter cartridge same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clean air filter and delivery apparatus of Robertson, III with a mesh grill as taught by Wolfert in order to improve the air cleaning efficiency.

6. Claims 8-10, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621) as applied to claim 1 as above, and further in view of Shanks et al. (U. S. Pat. 6,328,776).

The clean air filter and delivery apparatus of Robertson, III as modified by Reither as above includes all that is recited in claims 8-10, 20 except for the flexible duct positioned between the air filter means and the blower. Shanks et al. teaches an air purifying system for filtering and re-circulating room air comprising flexible duct 22 positioned between air filter means 14A, 14B and blower 12 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clean air filter and delivery apparatus of Robertson, III with a flexible duct between air filter means and the blower as taught by Shanks et al. in order to improve the air cleaning efficiency.

7. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621) as applied to claim 1 as above, and further in view of Greenleaf, Sr. (U. S. Pat. 5,417,729).

The clean air filter and delivery apparatus of Robertson as modified by Reither as above includes all that is recited in claims 11-12 except for the airtight hollow box including a circular inlet and a circular outlet having a first filter cartridge therein. Greenleaf, Sr. teaches an air cleaning system having an airtight box 12 with circular inlet and outlet 14, 16 and filter means 59, 69 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clean air filter and delivery apparatus of Robertson, III with an air tight box for filter cartridge as taught by Greenleaf, Sr. in order to improve the air cleaning efficiency.

8. Claims 13-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621), Schlör (U. S. Pat. 6,164,457) and Shanks et al. (U. S. Pat. 6,328,776).

Robertson, III shows a clean air filter and delivery apparatus comprising an air return means 1, an air filter means 2, a blower 13, an air supply means 4, a flexible duct 3 and a second filter cartridge 7 which are arranged same as claimed. Reither teaches a single inlet backward curved centrifugal fan same as claimed. Schlör teaches a filter cartridge with upper and lower surfaces and elongate sheet of filter 13 same as claimed. Shanks et al. teaches an air purifying system for filtering and re-circulating room air comprising flexible duct 22 positioned between air return means 14A, 14B and blower 12 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the single inlet backward curved centrifugal fan of Reither for the fan 13 of Robertson, III, to substitute the filter cartridge 21 of Schlör for the filter cartridge of Robertson, III and to provide the clean air filter and delivery apparatus of Robertson, III with a flexible duct between air return means and the blower as taught by Shanks et al. in order to improve the air cleaning efficiency. With regard to the claimed rigid spiral ductwork in claim 17, it would be an obvious matter of design choice to design the ductwork of Robertson, III with any desired material in order to obtain the optimum result since applicant has not disclosed that the claimed rigid spiral ductwork solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill and it appears that the claimed feature does not distinguish the invention over similar features in the prior art since, the ductwork of Robertson, III will perform the invention as claimed by the applicant with the ductwork having any kind of the material.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621), Schlör (U. S. Pat. 6,164,457) and

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Shanks et al. (U. S. Pat. 6,328,776) as applied to claim 13 above, and further in view of Greenleaf, Sr. (U. S. Pat. 5,417,729).

The clean air filter and delivery apparatus of Robertson, III as modified by Reither, Schlor and Shanks et al. as above includes all that is recited in claim 15 except for the air tight hollow box including a circular inlet and a circular outlet having a first filter cartridge therein. Greenleaf, Sr. teaches an air cleaning system having an airtight box 12 with circular inlet and outlet 14, 16 and filter means 59, 69 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further provide the clean air filter and delivery apparatus of Robertson, III with an air tight box for filter cartridge as taught by Greenleaf, Sr. in order to improve the air cleaning efficiency.

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson, III (U. S. Pat. 4,955,997) in view of Reither (U. S. Pat. 4,913,621), Schlor (U. S. Pat. 6,164,457) and Shanks et al. (U. S. Pat. 6,328,776) as applied to claim 13 above, and further in view of Wolfert (U. S. Pat. 4,762,053)

The clean air filter and delivery apparatus of Robertson, III as modified by Reither, Schlor and shanks et al. as above includes all that is recited in claims 16 except for the mesh grill for the air flow through the filter cartridge. Wolfert teaches a mesh grill 64 for the air flow through the filter cartridge same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the clean air filter and delivery apparatus of Robertson, III with a mesh grill as taught by Wolfert in order to improve the air cleaning efficiency. With regard to the claimed number of fans and air supplies, it would have been an obvious matter of design choice to design the fans and air supplies with

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any desired number in order to obtain optimum air cleaning result since applicant has not disclosed that the claimed number of fans and air supplies solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill in the art.

Response to Arguments

Applicant's arguments filed 6/20/2003 have been fully considered but they are not persuasive. First, Applicant's arguments with respect to claims 1, 4 have been considered but are moot in view of the new ground(s) of rejection. Second, the applicant argues that Schlor shows a rigid frame filter. However, the claims do not exclude a reading of a reference with a ridge frame filter. Third, with regard to claims 8-10 and 20, patent to Robertson, III (U. S. Pat. 4,955,997) as modified by Reither shows all claimed elements in claim 1 except for the flexible duct positioned between the air filter means and the blower. The patent to Shanks et al. clearly shows an air purifying system for filtering and re-circulating room air comprising flexible duct 22 positioned between air filter means 14A, 14B and blower 12 same as claimed. Therefore, it is the examiner's position that one skilled in the art would be able to provide the clean air filter and delivery apparatus of Robertson, III with a flexible duct between air filter means and the blower as taught by Shanks et al. in order to improve the air cleaning efficiency. Fourth, with regard to claims 11, 12, the applicant argues the filter in Greenleaf patent is different. However, the applicant failed to point out from the claims exactly what is missing from the Greenleaf patent. Fifth, the applicant argues there is no teaching to combine the references in the rejection of claims 13, 14, 17, the examiner cannot agree. Schlor teaches a filter cartridge with upper and

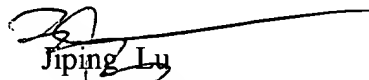
lower surfaces and elongate sheet of filter 13 same as claimed. Shanks et al. teaches an air purifying system for filtering and re-circulating room air comprising flexible duct 22 positioned between air return means 14A, 14B and blower 12 same as claimed. Therefore, it is the examiner's position that one skilled in the art would be able to substitute the filter cartridge 21 of Schlör for the filter cartridge of Robertson, III and to provide the clean air filter and delivery apparatus of Robertson, III with a flexible duct between air return means and the blower as taught by Shanks et al. in order to improve the air cleaning efficiency. With regard to the claimed rigid spiral ductwork in claim 17, it would be an obvious matter of design choice to design the ductwork of Robertson, III with any desired material in order to obtain the optimum result since applicant has not disclosed that the claimed rigid spiral ductwork solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious. Sixth, the applicant argues that there is no teaching to combine the references in the rejection of claim 15. the patent to Greenleaf, Sr. teaches an air cleaning system having an airtight box 12 with circular inlet and outlet 14, 16 and filter means 59, 69 same as claimed. Therefore, it would have been obvious for one skilled in the art to derive the broadly claimed invention by providing the clean air filter and delivery apparatus of Robertson, III with an air tight box for filter cartridge as taught by Greenleaf, Sr. in order to improve the air cleaning efficiency. Lastly, the applicant also argues that the Wolfert patent does not disclose a filter mounting on a suspended ceiling. Again, the examiner cannot agree. Wolfert teaches a mesh grill 64 for the air flow through the filter cartridge same as claimed. Therefore, it would have been obvious for one skilled in the art to provide the clean air filter and delivery apparatus of Robertson, III with a mesh grill as taught by Wolfert in order to improve the air cleaning efficiency.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 703-308-2354. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus can be reached on 703 308-1935. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308-7764 for regular communications and 703 308-7764 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1113.


Jiping Lu
Primary Examiner
Art Unit 3749

J.L.
September 8, 2003